product guide for 1981.

VANE
BLACKHAWK®
BEAR®

APPLIED POWER®

The eighties will be an extremely challenging decade for the motor trade. This decade will see major changes in the attitudes towards automotive design. Cars will be smaller. The emphasis will be on maximum fuel efficiency and minimum pollution. Sophisticated ignition and fuel control systems will become commonplace. And service workshops will need the right equipment to be able to cope with design changes – to make fault diagnosis faster, easier and accurate **to the levels demanded by today's components.**

This was confirmed by a recent survey of the retail motor service industry, which concluded: "The speed of technological change is about to exceed the capacity of the servicing side of the industry to keep up with servicing techniques, materials and equipment."

VANE, BLACKHAWK or BEAR equipment enables the experienced mechanic to become a specialist able to troubleshoot virtually all cars likely to be seen on Australian roads. With Applied Power supplying the professional equipment to enable the mechanic to make the most of his own expertise, the resulting partnership will mean top grade auto service, a service in keeping with the demands of the modern vehicle.

VANE, BLACKHAWK, BEAR are registered trademarks of APPLIED POWER.

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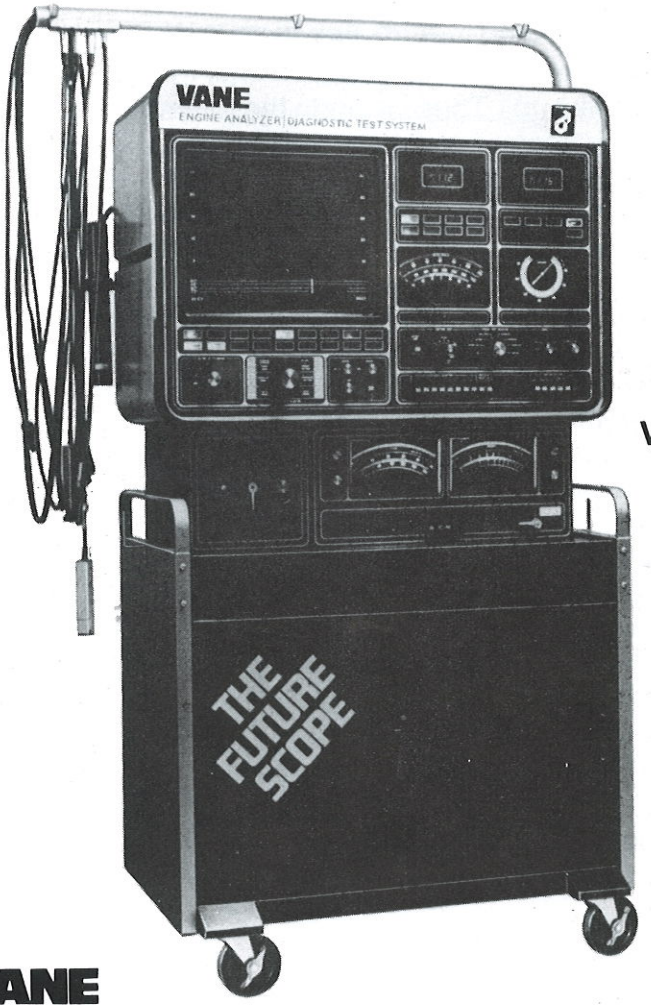
Certain products shown in this catalogue are covered by one or more patents (or patents pending) held by APPLIED POWER.

ENGINE ANALYSERS

The FUTURE SCOPE brings to the Australian workshop advanced features that are easier than ever before to use. With the ability to adapt to the changing needs of future engine developments, with plug-in adaptors, and prompter-light panels to keep the mechanic on the track throughout the test procedures, the FUTURE SCOPE is designed as the complete analyser for today and tomorrow to outlast and outperform other currently available analysers.

- **Prompter-Light Panels** to indicate analyser activity.
- **48 cm Black Face Scope** with brilliant white patterns.
- **7 Millisecond Sweep** to aid troubleshooting.
- **Two Bright Digital Displays** for instant information.
- **Program Test Selector** automatically programs analyser.
- **Auto-Ranging Tacho** eliminates tacho switching.
- **Expanded Tacho Scale** for greater readability.
- **Secondary Trigger and Special Ignition System** switches.
- **Pattern Shift and Pattern Spread** controls.
- **Electronic Fuel Injection** test leads for quick diagnosis.
- **Inductive Amps Pick-Up** with digital display.
- **Battery Load and Test** for complete under-load testing.
- **Vacuum Systems Tester** to check complex vacuum systems.
- **Inbuilt Calibration** circuitry for checks at any time.

The FUTURE SCOPE...ahead of its time, to increase the future scope of your business!



VP-888

VANE

VP-880 – the Future Scope

VP-888 – Future Scope with inbuilt infra-red fuel economy/emissions analyser.

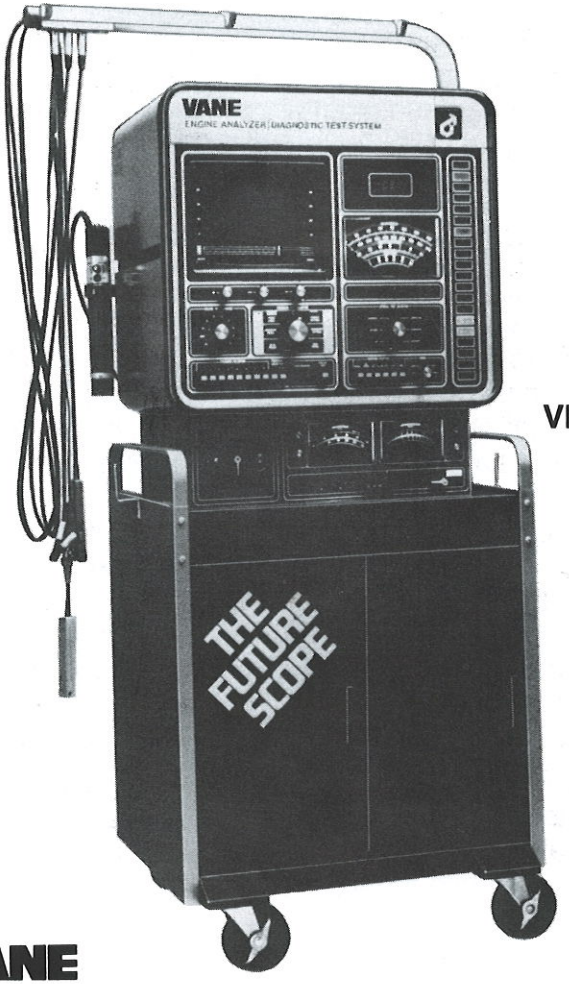
ENGINE ANALYSERS

VANE VP-860 and VP-868 FUTURE SCOPES have many of the great features of the VP-880 in a lower-priced more compact unit. These include the future engine adaptability and prompter-light panels to help your mechanic become proficient faster.

The model VP-868 includes an inbuilt infra-red fuel economy/emissions analyser, a valuable troubleshooting tool in today's fuel conscious world where fuel wastage, power loss and high pollutant emissions are unacceptable.

- **Prompter-Light Panels** to indicate analyser activity.
- **31 cm Black Face Scope** with brilliant white patterns.
- **7 Millisecond Sweep** to aid troubleshooting.
- **Bright Digital Display** for instant information.
- **Program Test Selector** automatically programs analyser.
- **Expanded Tacho Scale** for greater readability.
- **Secondary Trigger and Special Ignition System** switches.
- **Pattern Shift and Pattern Spread** controls.
- **Electronic Fuel Injection** test leads for quick diagnosis.
- **Control Unit** test for dynamic electronic ignition tests.
- **Inbuilt Calibration** circuitry for checks at any time.

VANE FUTURE SCOPES help you to give greater customer satisfaction by providing a better service capability to back-up your professional expertise!



VP-868

VANE

VP-860 – the Future Scope.

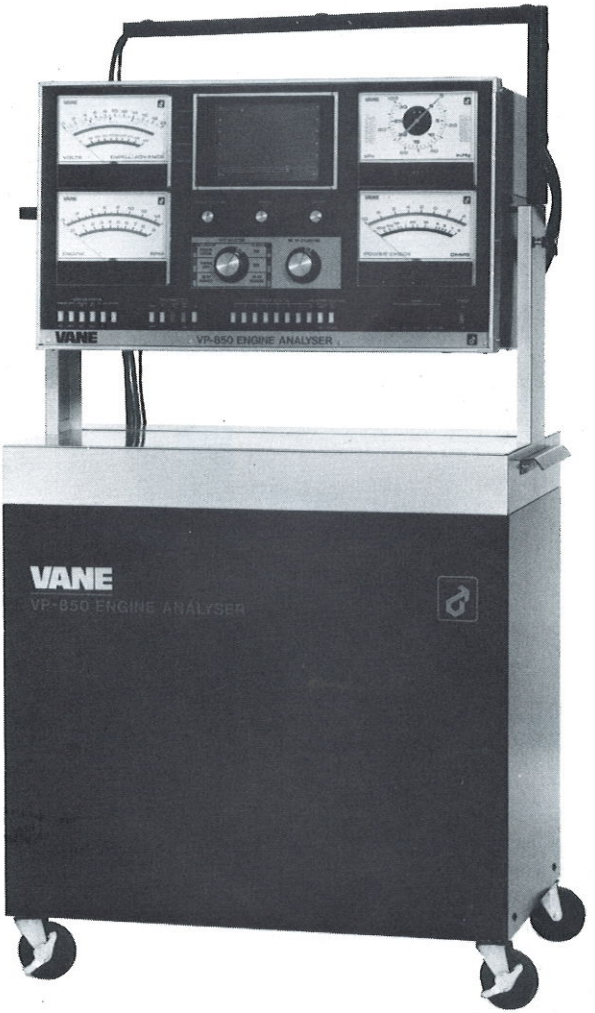
VP-868 – Future Scope with inbuilt infra-red fuel economy/emissions analyser.

What your workshop needs is Australia's top tune – the VANE VP-850 engine analyser.
Once you've had the VANE VP-850 engine analyser working for you, the increased profits from increased tune-up turnover will be music to your ears.
Just 6 simple steps give you quick, complete engine analysis, and you can forget about time lost through guesswork and "trial-and-error" methods. The programmed test of the VP-850 ensures that test procedures are made in the correct sequence.

- 23 cm black face oscilloscope.
- Secondary trigger and/or special ignition switches.
- 4 – 20 cm backlighted meters.
- Color-coded meter scales and test switches.
- Program test selector.
- Power check test.
- Vacuum systems testing.
- Four range ohmmeter.
- Pattern shift switch and pattern spread control.
- In-built calibration circuitry.

The **VANE VP-850** is Australia's most popular tuner.

AVAILABLE WITH 5 CYLINDER SELECTOR
All the benefits of the VANE VP-850 can now be put to use on the AUDI 5E, with the push of a button. Specify model VP-850/5 to obtain this inbuilt facility. (Also obtainable as a retrofit kit for installation by a VANE Authorised Service Centre.)



VANE

VP-850 Engine Analyser.
Australia's top tuner – it's
the popular one!

EMISSION ANALYSERS

VANE

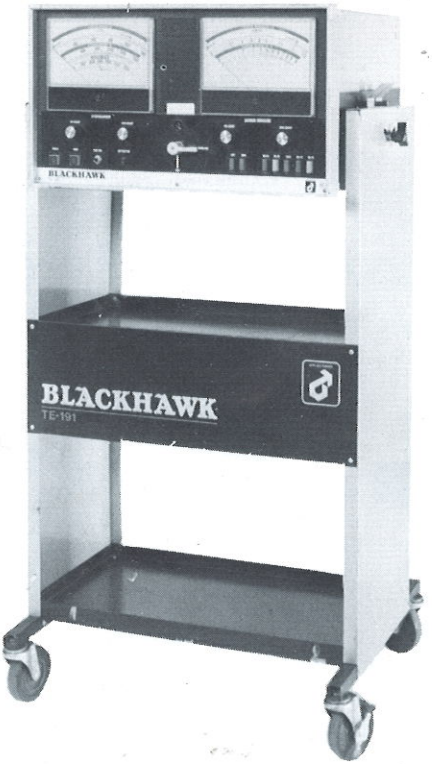
VP-740
Fuel Economy/Emissions Analyser

This dual-beam infra-red analyser samples the vehicle's exhaust to measure and indicate the proportions of unburned hydrocarbons (HC) and carbon monoxide (CO), critical factors in the correct tuning of today's leaner burning engines.

The dual-scale 20 cm black-face backlighted meters feature color-coded scales with ranges:
HC 0-500 p.p.m. and 0-2000 p.p.m.
CO 0-2.5% and 0-10%.

Response time is a maximum of 10 seconds.
A stainless steel tailpipe probe and a 9M long hose are included.

Use VP-715 Heavy Duty Emissions Test Kit when checking exhaust emissions whilst operating the vehicle on a Chassis Dynamometer.



BLACKHAWK

TE-191 Fuel Economy/ Emissions Analyser

Analyses engine exhaust by infra-red gas detection and provides a valuable guide as to how well an engine converts fuel into usable energy.
TE-191 measures the proportion of unburned Hydro-
carbon (HC) and Carbon Monoxide (CO) and indicates any improper burning of fuel that can result in power loss, high pollutant emission levels and wasted fuel.
Duel ranges:
CO 0 to 2.5%
0 to 10%

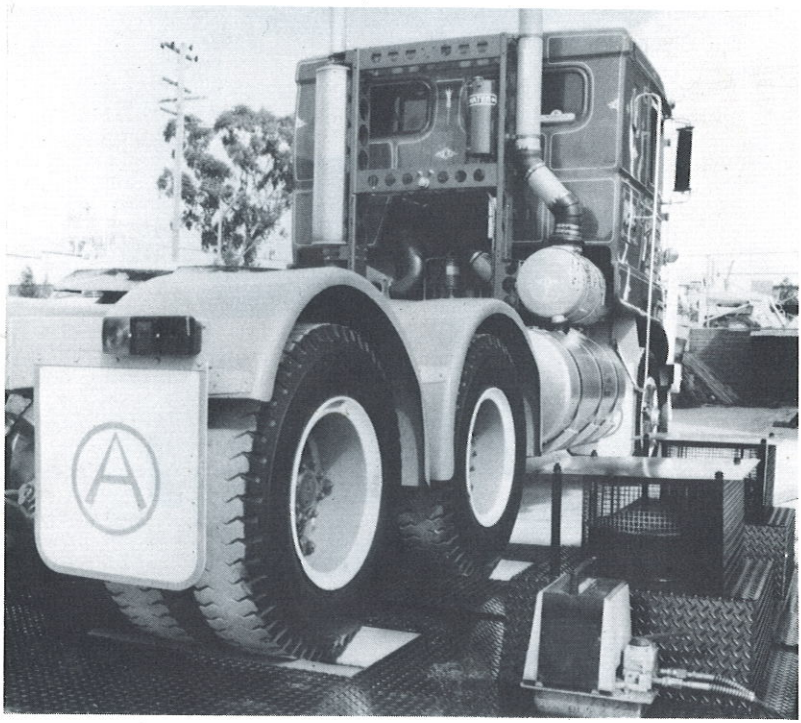
HC 0 to 500 P.P.M.
0 to 2000 P.P.M.
Plus inbuilt Self-Checking Tacho-meter with Induction Pick-up.

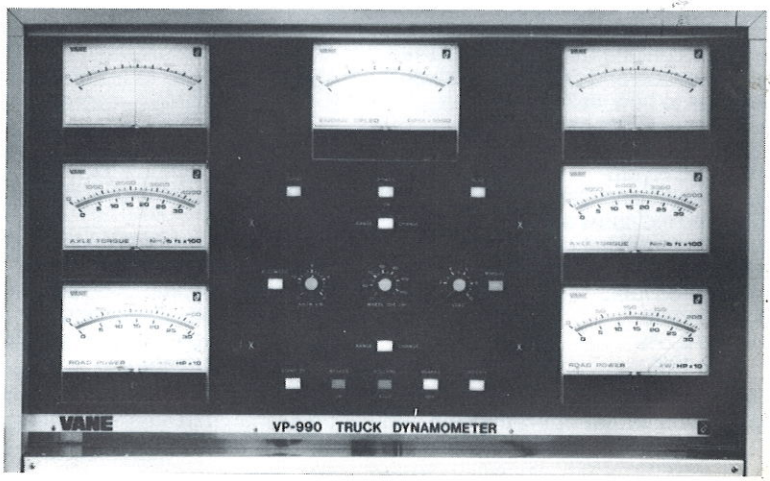
- Provides a guide to overall engine operation.
- Allows carburettor adjustments to modern lean settings.
- Permits vastly improved engine operation and fuel economy.

A valuable diagnostic and trouble-shooting instrument.

Use VP-715 heavy duty Emissions Testing Kit when checking exhaust emissions whilst operating the vehicle on a Chassis Dynamometer.

TRUCK DYNAMOMETER





VANE

VP-990
Truck Chassis Dynamometer

No road test can tell the truth about a truck like the VP-990 can. The Vane VP-990 simulates driving reality right into your workshop and under controlled conditions. For whether it be engine efficiency on the highway or generated problems under load from a steep mountain climb, the VP-990 can help provide the answers – the first time.

A truck workshop needs a dynamometer to service today's rigs. The truck operator needs a dynamometer-equipped workshop to ensure his vehicle is effectively maintained.

The Rollers

The VP-990 Truck Dynamometer is capable of handling both single and dual rear-axle trucks or prime movers. The centre distance between the rollers can be adjusted to accommodate different axle centres and load can be selected for application to a single axle or to both axles together.

The Console

The console layout is designed for fast, easy readouts and features 7 back-lit meters which display

- front bed road power
- front bed axle torque
- front bed road speed
- rear bed road power
- rear bed axle torque
- rear bed road speed
- engine rpm

It allows the operator to conduct all tests from the driver's seat. Power and torque readings can be measured at any speed and load can be set to simulate various road conditions.

The Handpiece

The full function remote hand-piece allows all functions to be controlled from the driver's seat or from the workshop floor, whichever helps the testing procedure most. This mini control panel with extended cable allows the operator free movement around the vehicle whilst still retaining control of the testing programme.

The Features

Include the electro-magnetic eddy current retarders which assure that "on-the-road" performance is clearly simulated in your workshop. Rear axle torque and developed road horsepower are shown for any speed or road condition.

Other essential features are —

extra large roller width – for maximum width trucks

air operated roller brakes – to assist drive-on/drive-off

anchor pots – allows safe operation at high speeds

optional hand-piece – provide remote control of all functions.

automatic power balance – controls the road speed when both beds are in operation.

The Specifications

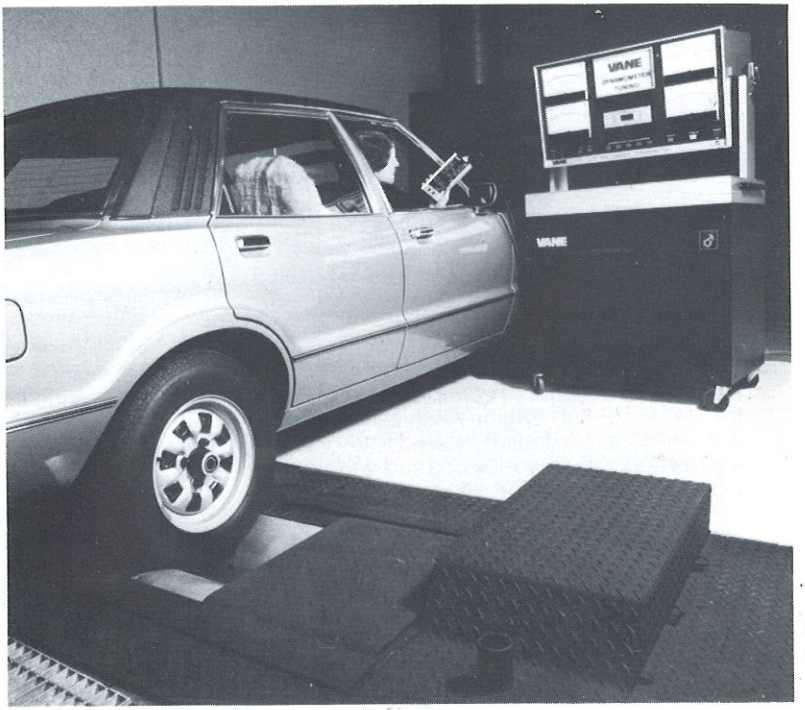
Power: 900 Kw at 160 Km/h (dual axle)
Axle torque: 18000 Nm (dual axle)
Tachometer: 0-5000 rpm
Roller size: 266 mm dia.
Roller length: 966 mm
Roller centres: 451 mm
Track width: Max 2840 mm Min. 920 mm
Axle separation: Max. 1525 mm Min. 1200 mm
Bed slide act.: Hydraulic power assisted
Roller Brakes: Air operated
Power: 415V, 3PH, 30A
Pit Dimens: L 2770 mm, W 4300 mm, D 530 mm

CHASSIS DYNAMOMETERS

VANE VP-950 Series Chassis Dynamometers provide the ultimate in automobile trouble-shooting under operational conditions. They are designed to conduct controlled road testing right inside the workshop and to simulate the hard demands of city driving or the open road. Road testing on today's highways is not only unsatisfactory it's time consuming and dangerous. With the VANE VP-950 the operator conducts all tests from the driver's seat. POWER and TORQUE readings can be measured at any speed, up to 160 Km/h, and load can be set to simulate various road conditions.

In AUTOMATIC mode, the eddy-current retarder load is applied when the vehicle reaches any pre-set speed and this speed is held constant regardless of power output. MANUAL mode allows load variation and a set load is held constant through the speed range. Workshops equipped with VANE VP-950 Chassis Dynamometers can be more efficient and more profitable because they specialise in premium timing for good performance, reliability and economy.

CHASSIS DYNAMOMETERS



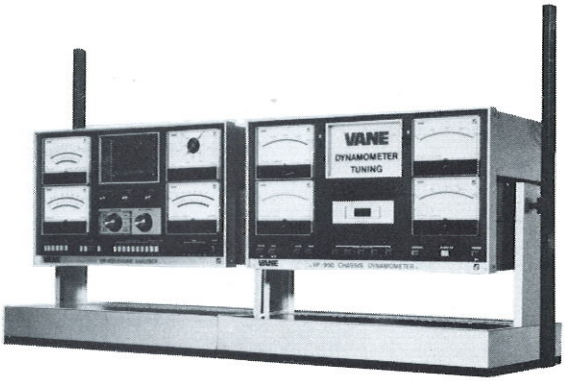
VANE

VP-950 Chassis Dynamometer

The rollaround console suits any size workshop and any size vehicle... front or rear wheel drive. The impressive appearance and illuminated merchandising panel helps promote extra service business. Simultaneous readout of power, axle torque, road speed and engine speed saves test time by providing the complete vehicle performance picture.

Specifications:
Power: 0-75 Kw
0-150 Kw
0-300 Kw
Torque 0-700 Nm
0-1400 Nm
0-2800 Nm
Road Speed: 0-160 Km/h
Engine Speed: 0-9000 r.p.m.
Acceleration Time 0-99.9 sec.
Axle Load: 4500 Kg. (STD)
5500 Kg. (heavy duty)
Roller Size: 27cm dia.
Pit Size: L 384 cm, W 107 cm, D 48 cm.
Power Requirement: 415V 3ph 20A.

CHASSIS DYNAMOMETERS

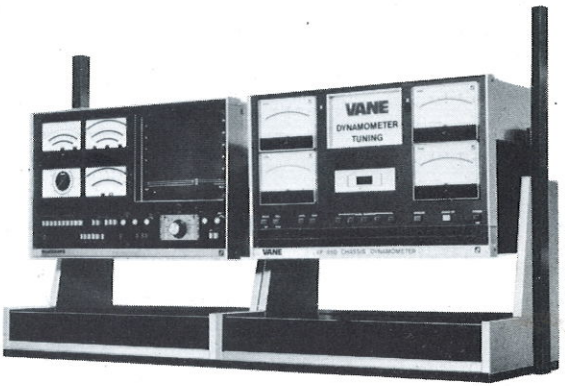


VANE

VP-952 Chassis Dynamometer/ Engine Analyser

A monorail version of the VP-950, matched to a monorail version of the VANE VP-850 Engine Analyser, the VP-952 is particularly suited to limited floor space workshops and is a compact package for diagnosis of total vehicle performance. Specifications are identical to the model VP-950.

Monorail Dimensions: Length 670cm
Height 259cm



VANE

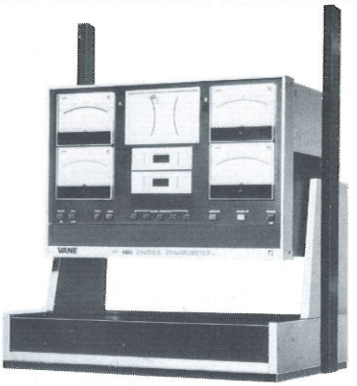
VP-955 Chassis Dynamometer/ Engine Analyser

Combined monorail version of the VANE VP-950 and BLACKHAWK TE-275 in matching cabinets, the VP-955 provides a most comprehensive performance testing and tuning facility, with total engine diagnosis added to full road test capability. Specifications are identical to the model VP-950.

Monorail Dimensions: Length 670cm
Height 259cm

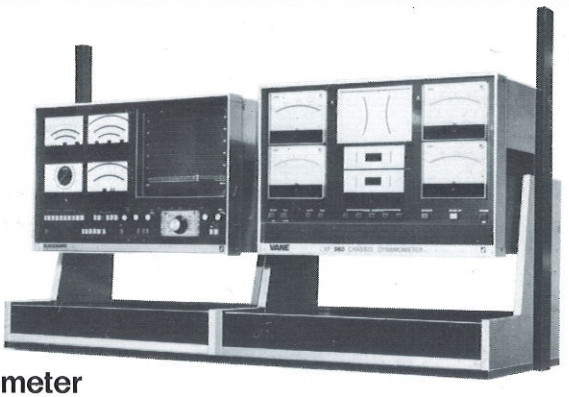
VANE

VP-960 Chassis Dynamometer Brake Tester



The VANE VP-960 provides all the great features of the VP-950 Chassis Dynamometer...PLUS the ability to accurately measure how well the vehicle will STOP! Road testing brakes is a hazardous operation with unreliable results but the Brake pedal effort is also measured braking efficiency of all four wheels, under fully controlled conditions. Front or rear wheels are driven by heavy-duty electric motors up to the test speed of 70 Km/h and as the brakes are applied, the braking torque for each wheel is indicated. VP-960 independently measures and brake fade can be determined by continuous or repeated operation. The monorail console is power-operated for quick, easy travel to line up with the driver's position.

Specifications:
Dynamometer: Same as VP-950 (except pit dimensions)
Brake Tester:
Braking Efficiency: 0-100
Brake Pedal Effort: 0-30 Kg
Pit Size: L 384cm, W 107 cm, D 81 cm
Monorail: L 670 cm, H 259 cm
Power Requirement: 415V 3 ph 65 A



VANE

VP-965 Chassis Dynamometer Brake Tester Engine Analyser

For complete vehicle testing, the VP-965 comprises a VP-960 with a BLACKHAWK TE-275 Engine Analyser in matching monorail cabinets. Specifications are identical to the VP-960.

COMBUSTION ANALYSERS

VANE

155 Combustion Analyser

A portable, compact exhaust gas analyser, the VANE 155 can be used in the workshop or for road testing. Indicates air-fuel ratio, combustion efficiency, equivalent carbon monoxide percentage. Operates from 12V vehicle battery and is unaffected by voltage changes from the vehicle charging system.

BLACKHAWK®

TE-473 Combustion Analyser

The BLACKHAWK TE-473 provides quick analysis of faulty carburetion. This rugged unit is fully portable and assures accurate performance for both shop and road testing. Combustion analyser can be used for measuring air-fuel ratios.

VANE

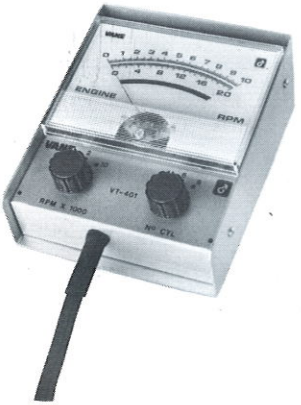
VT-400 Tachometer

Specifically designed for use with the latest electronic ignition systems to provide accurate, consistent readings. The VT-400 is suitable for all known types of electronic ignition presently in use, plus conventional ignition. Fitted with an inductive pick-up for use with any type engine, without selector switching.

The range switch provides

0-1,000 RPM
0-2,000 RPM
0-10,000 RPM

A high quality 15 cm meter provides super accurate readings... typically calibrated to within 1% of full scale.



VANE

VT-401 Tachometer

The lower priced VT-401 has the same suitability for all current types of electronic ignition as the VT-400. Uses a normal coil clip pick-up and has a selector switch for 4, 6 and 8 cylinder engines, 4 cycle only.

The range switch provides

0-1,000 RPM
0-2,000 RPM
0-10,000 RPM

A rugged metal case with carrying handle contains a precision 15 cm meter to provide accurate, discrete and easily read engine speed indications.

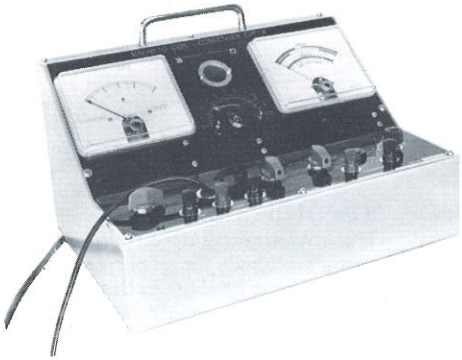
IGNITION SYSTEM TESTERS

BLACKHAWK®

TE-463 Ignition System Tester

The BLACKHAWK TE-463 tests the ignition system while the engine is running. To check:

- Plug firing voltage.
- Coil output kV.
- Plug load kV.
- Coil primary and secondary.
- Condenser.
- Continuity.
- Distributor.
- High tension wiring.



VANE

196 AC Magneto Coil and Condenser Tester

The VANE 196 AC is specifically designed to test all types of coils and condensers fitted to magneto ignition engines. Also suitable for testing conventional coils.

IGNITION SYSTEM TESTERS

BLACKHAWK®

TE-423 Dwell-Tach Tester

Provides accurate cam angle readings and r.p.m. for 4, 6 and 8 cylinder petrol engines.
Tachometer 2 ranges 0- 1200 r.p.m.
0-12000 r.p.m.
Dwell 0-45° (8 cyl)
0-60° (6 cyl)
0-90° (4 cyl)

BLACKHAWK®

TE-425 Dwell-Tachometer

An accurate, self-calibrating Dwell Tachometer for today's emission control equipped engines with either conventional or electronic ignition systems. The TE-425 incorporates self-calibration circuitry to let the mechanic verify accuracy at the turn of a switch.
A colour-coded 15 cm meter displays RPM and DWELL for 12V negative ground 4, 6 and 8 cylinder engines.
Tachometer 2 ranges 0-1200 RPM
0-6000 RPM
Dwell 0-45° (8 cyl)
0-60° (6 cyl)
0-90° (4 cyl)

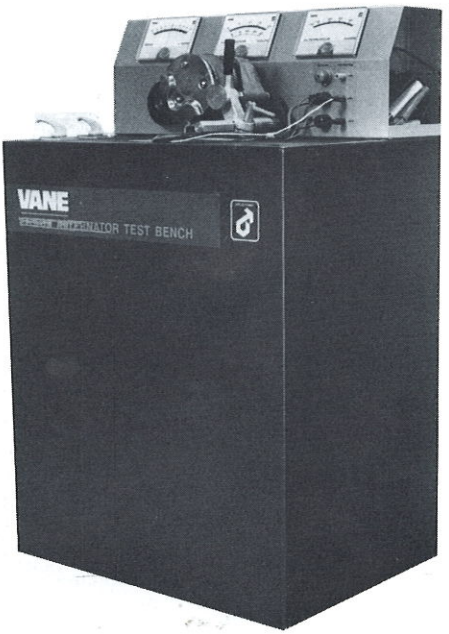
ALTERNATOR TEST BENCH

VANE

VT-500 Alternator Test Bench

A new LOW COST TEST BENCH for checking 6 VOLT, 12 VOLT and 24 VOLT alternators and generators. The variable speed, constant power drive is reversible and has adequate power to drive alternators against loads up to 60 AMPS over the full speed range 500 to 5000 R.P.M. Speed adjustment is air-assisted, controlled by a lever-handle valve. Large, bold meters indicate SPEED, ALTERNATOR VOLTS and ALTERNATOR AMPS. Alternator mounting is fast and simple, utilizing the normal mounting lug and there is no case distortion or damage caused by clamping. A unique spring-loaded belt tensioner allows easy belt mounting and provides adequate tension for full load operation. EASY TO BUY...EASY TO USE!

ALTERNATOR TEST BENCH



VANE

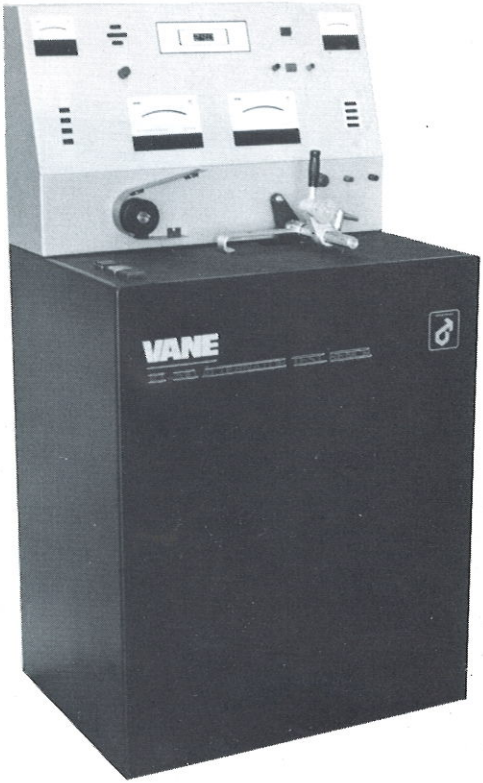
VT-505 Alternator Test Bench

HEAVY DUTY... designed to handle the big, heavy alternators used on trucks and earthmoving equipment, this bench has ample power to drive 24V alternators loaded up to 100A through the speed range 500 to 5000 RPM, whilst retaining the capability of handling regular 6V or 12V alternators.

VT-505 features include:

Variable speed, constant power, reversible drive.
Air assisted speed adjustment.
Simple mounting bracket and automatic belt tensioning.
The three 15 cm meters display:
SPEED 5,000-0-5,000 RPM
ALTERNATOR VOLTS 0-20V, 0-40V.
ALTERNATOR AMPS -10 to 140 AMPS

ALTERNATOR TEST BENCH



VANE

VT-511
Alternator Test Bench

Designed for professional testing of automotive alternators and generators, the VANE VT-511 features include:

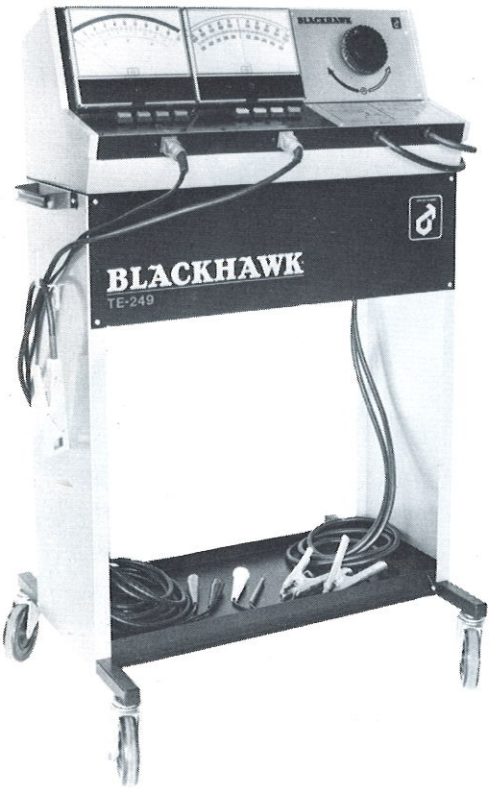
- 6 VOLT, 12 VOLT and 24 VOLT operation.
- DIGITAL VOLTMETER for extreme accuracy and readability over full voltage range, isolated for general use 0 to 99.9 volts.
- Large ALTERNATOR AMPS meter indicating alternator output.
- Inbuilt resistive loads to provide a full 60 AMP capacity, including battery load.
- Automatic 12/24 volt sensing/switching resistive load banks, to provide correct load for test voltage.
- Constant power, reversible, infinitely variable speed range 500 to 5000 R.P.M.
- Air assisted speed adjustment.
- Audible diode test PLUS accurate diode characteristic measurement.
- Isolated FIELD AMPS meter.
- Isolated indicator lamp to represent dashboard lamp for checking and setting regulators.
- Reverse polarity warning.
- Simple mounting bracket.
- Automatic belt tensioning.

DISTRIBUTOR TESTER

VANE

VA-405 Distributor Tester

To accurately check both centrifugal and vacuum advance curves through the full speed range, the VANE VA-405 is controllable within very fine limits. The speed setting remains stable under all required test conditions. Solid state circuitry ensures long service life. The distributor is easily clamped and positioned in the self-aligning non-slip driving chuck. A hand-operated vacuum pump allows detection of faulty diaphragms in vacuum advance units.



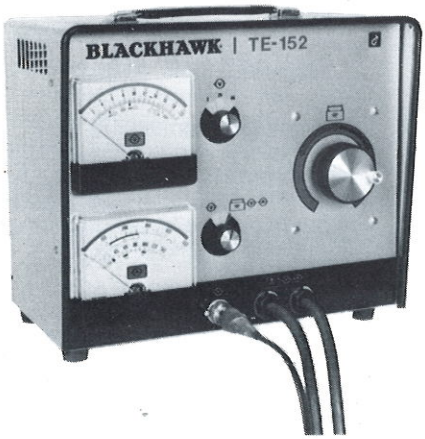
BLACKHAWK®

TE-249 Alternator-Regulator-Battery-Starter Tester.

The ARBST with "muscle" for complete testing of all starting/charging systems, including the heaviest of heavy-duty systems, with up to 1000 amp capacity.
Induction-type amps pick-up clamps on to cable for quick, easy, hook-up.

- Battery capacity
- Starting system (cranking volts, amps)
- Charging system
- Alternator output – voltage regulator
- Troubleshooting

The load control utilises an adjustable carbon pile.
Bold 20 cm meters are scaled:
Volts — 2V, 20V, 40V.
Expanded Scale 13.0-15.6V
Amps — Centre zero 100A, 500A, 1000A.
Pushbutton switches control range selection.



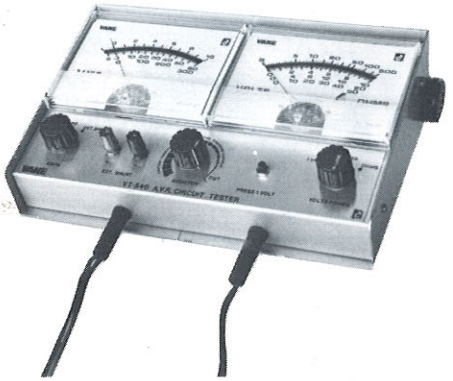
BLACKHAWK®

TE-152 Battery-Starter Tester

Provides complete information on vehicle starting systems, with one simple connection, and enables tests of even heavy-duty truck batteries.

- 500 Amp carbon pile.

Voltmeter 3 ranges	0-2	V
	0-20	V
	0-40	V
Ammeter	0-500A	



VANE

VT-540 A.V.R. Circuit Tester

A valuable instrument for the general or auto electrical workshop, the VT-540 provides nine ranges on its bold, colour-coded 15 cm meters, for checking battery, alternator/ generator, regulator, starter and all electrical circuits.
Suitable for 6V, 12V, 24V and 32V systems.

VOLTS, 4 ranges 0-1V
0-10V
0-20V
0-50V

AMPS, 4 ranges 1-0-10A
5-0-60A
0-300A
(with ext. shunt)
0-1000A
(with ext. shunt)

OHMS 0-500 OHMS

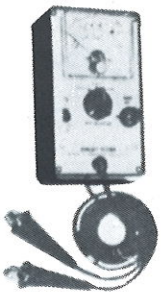
BLACKHAWK®

TE-413 Amp-Volt-Regulator Tester

Test the entire low voltage electrical system...battery cranking output, coil primary, points resistance, regulator voltage, alternator/ generator output, circuit continuity, etc.

Voltmeter 2 ranges	0-	1.8V
	0-	18 V
Ammeter	0-100	A

ELECTRICAL TESTERS



BLACKHAWK®

TE-416 Circuit Tester

A pocket-size tester for fault-finding electrical systems and circuit resistance. Can also be used to test diodes.

Voltmeter 2 ranges	0-1.8V
	0-18 V
Ohmmeter 2 ranges	0-1000 ohms
	0-1,000,000 ohms

VANE

616 Diode Tester

Checks rectifiers or diodes for shorted or open circuits or any drop in efficiency due to age.

Ammeter	3-0-3A

TIMING LIGHTS

VANE

VT-420 Timing Light

A new concept, the budget priced VT-420 is the most convenient timing light available! Just slip the clamp-on inductive pick-up over the No. 1 plug lead and the VT-420 is ready for use. NO BATTERY LEADS... NO SWITCHES!

The brilliant blue-white Xenon flash tube allows timing to be checked up to 6000rpm, and is protected by a heavy-duty rubber nose cone. Easy change, standard size internal batteries provide long usage.

BLACKHAWK®

TE-1612 Power Timing Light

Provides a high intensity blue-white light for timing engines, even in bright daylight, to more than 6,000 r.p.m. with automatic voltage selector for 6 or 12 volts.

BLACKHAWK®

TE-1613 Power Timing Light

Features clamp-on inductive pick up... Particularly suitable for larger engines where the No. 1 plug is hard to reach or obscured by accessories. Same inbuilt features as the TE-1612 but even easier to use!

BLACKHAWK®

TE-1615 Timing-Advance Tester

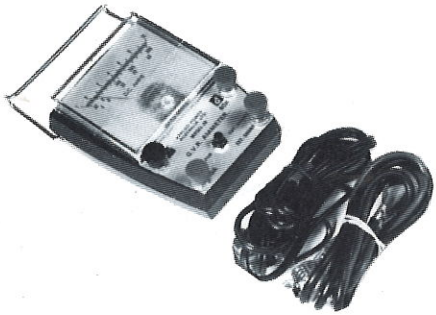
Checks ignition timing and tests distributor spark advance over the full engine speed range to more than 6,000 r.p.m. without removing the distributor. Quickly identifies faults in the centrifugal or vacuum advance mechanisms. Features clamp-on inductive pick-up, 6 or 12 volt operation with automatic voltage selector and a high-intensity blue-white Xenon flash tube.

HANDI-SET ANALYSERS

VANE

27 Voltmeter

Three separate voltage ranges... 0-1, 0-10, 0-20V.
On low range each scale division reads 1/50th volt, making it most suitable for detecting poor electrical joints.



VANE

28 G.V.R. Ammeter

For measuring starter current, generator output, adjusting regulators and cut-outs.
Three ranges... 1-0-10, 6-0-60, 30-0-300A.

VANE

36 Generator Tester

Enables the serviceman to adjust all types of generators and regulators and to test batteries under starter load.
Two ranges... 0-50A, 0-18V.

VANE

38 Ohmmeter

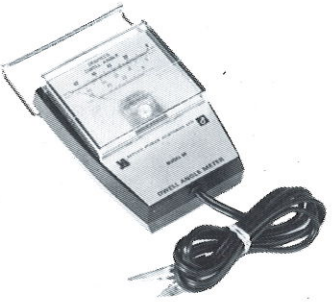
A two-range ohmmeter for measurements from 0.5 ohm up to 20,000 ohms for testing electrical circuits.

HANDI-SET ANALYSERS

VANE

48 Output and Reserve Tester

The ignition system can be quickly and accurately checked for ignition output and reserve.



VANE

68 Dwell Angle Meter

Provides an accurate method of setting breaker points gap. Three separate scales, colour-coded, for easy reading on all coil ignition engines.

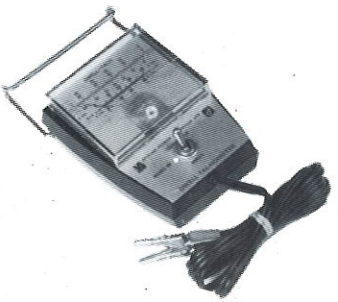
VANE

88 Tachometer

For checking r.p.m. on all 4, 6, or 8 cylinder cars with 6 or 12 volt systems.

Speed ranges: 4 cyl 6,000 r.p.m.
6 cyl 4,000 r.p.m.
8 cyl 3,000 r.p.m.

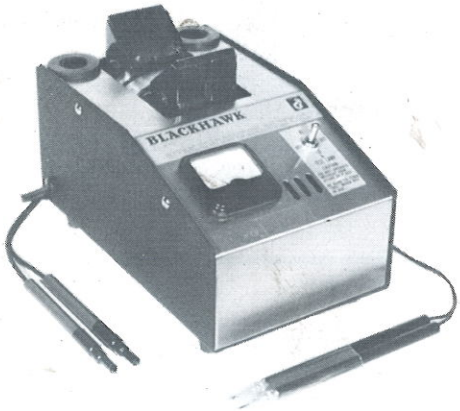
Accuracy: Better than 2%



VANE

98 Dwell Tachometer

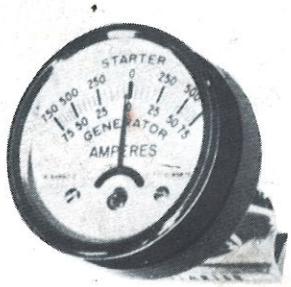
A combined tune-up instrument enables many tests to be made to the distributor and ignition system. Hook-up is the same for both dwell angle and r.p.m. tests.



BLACKHAWK

TE-675
Armature Growler

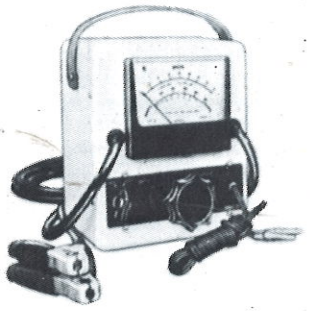
For checking generator and motor armatures from 5cm to 15cm in diameter. Inbuilt AC ammeter provides accurate current readings for checking each armature segment with the test probes. Three position switch includes a HI setting for critical troubleshooting of suspected marginal faults. The second set of probes are used with the test lamp to detect open or grounded windings.



BLACKHAWK®

TE-442 Current Indicator

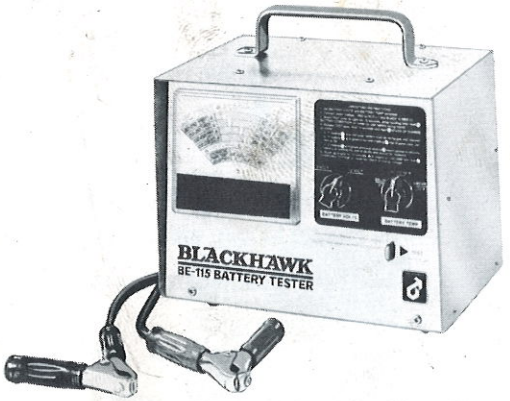
Pocket size ammeter with double face induction pick-up, tests alternator/generator output and starter draw.
Ranges 750-0-750A
75-0-75 A



VANE

606 6/12V Battery Loader and Tester

Tests condition of 6V and 12V batteries under load.
Carbon pile 250A.

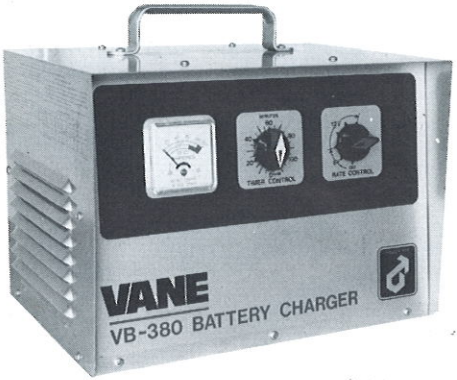


BLACKHAWK®

BE-115 Battery Tester

For customer appeal and accuracy, choose this tester. Large colour-coded meter with expanded scale will give accurate readings on all amp hour size batteries. Not only checks battery condition but also, alternator and generator to determine if charging system is causing problem. This tester has a built-in load tester for accurate battery testing in or out of the vehicle.

BATTERY CHARGERS



VANE

VB-380 Battery Charger

More amps for less dollars!
The high rate portable charger with 6/12V 100/80A discharged battery rating and 300A boost capacity.

- Two hour electric timer...with "hold" position for either automatic timing or continuous charging.
- Polarity indicator...indicates "go" when battery connection is correct. Prevents blown alternator diodes.
- Colour-coded ammeter...Full scale 0 to 100 amp range, indicates charging rate within ± 5% accuracy.
- Efficient fan cooling system...fan dissipates heat, avoiding damage to components.
- Overload protection...two automatic reset circuit breakers provide overload protection, preventing damage to the charger.

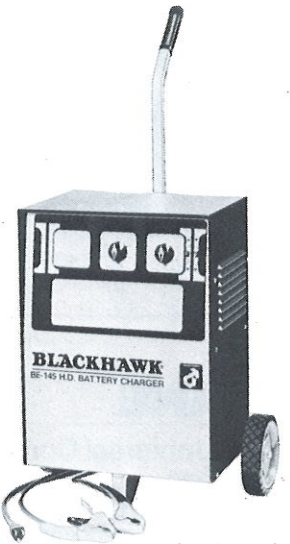
VANE

VB-385 Battery Charger

The Hi-rate Mobile with these features:

- Two hour electric timer...with "hold" position.
- Polarity indicator.
- Colour-coded ammeter...full scale 0 to 100 amp range.
- Efficient fan cooling system.
- Overload protection.

Designed for the busy service station and workshop. Rolls around on 6 inch wheels for use in or outside the workshop.
6/12 volts 100/80 amp discharged battery rating.
300 amp boost start capacity.

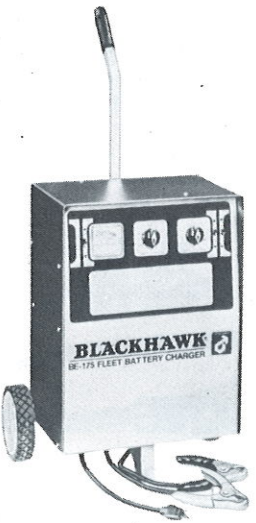


BLACKHAWK®

BE-145 Heavy-Duty Mobile Charger

80 amp discharged battery rating plus 300 amp boost!
Suitable for all 6 and 12V battery charging, including maintenance-free batteries, activating dry-charge batteries, cranking "dead" vehicles and parallel charging of multiple batteries.

- Automatic Charge Mode...charge 12V batteries at a pre-set voltage to prevent gassing.
- Infinite Rate Control...select any setting between zero and 80 amps.
- Polarity Protection...prevents damage to charger if incorrectly connected.
- Dead Battery Switch...allows initial charge into completely "dead" battery.



BLACKHAWK®

BE-175 Fleet Duty Charger

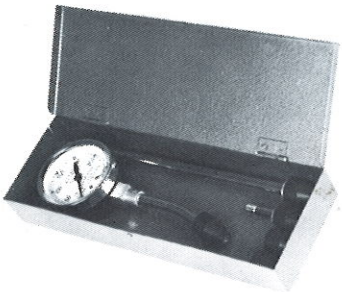
A great performer in fleet operations where maximum vehicle usage is essential, the BE-175 will fast charge at 6,12 or 24 volts, and boost start vehicles with "dead" batteries.
80 amp discharged battery rating, plus 300 amp boost!

- Automatic Charge Code... charge 12 volt batteries at a pre-set voltage to prevent gassing.
- Infinite Rate Control... set the charging rate at any desired amperage between zero and maximum.
- Two-hour Electric Timer.
- Dead Battery Switch.
- Polarity protection.
- Activate dry-charge batteries.

VANE

Cylinder Compression Gauge

Range 0-2500 kPa fitted with quick release valve, available with offset, short or straight stems.
221...Short Stem
222...Straight Stem
223...Offset Stem



VANE

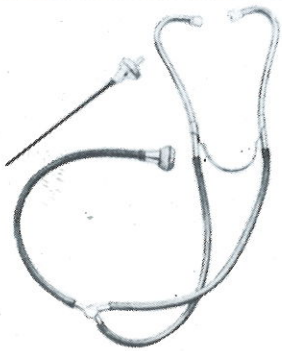
90 Universal Compression Gauge

A complete kit. 2500 kPa gauge with offset, standard and long adaptors in metal box.

VANE

124 Universal Oil Pressure Tester

5 cm gauge calibrated 0-800 kPa with 45 cm long armoured hose and adaptors for most engines



VANE

41 Stethoscope with Probe

For tracing hard-to-define engine noises.

VANE

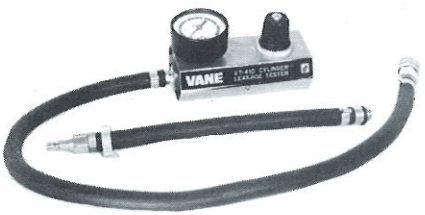
25 Vacuum and Fuel Pump Pressure Gauge

10 cm meter calibrated 0 to −87 kPa vacuum and 0 to +50 kPa pressure, complete with hose and adaptor.

BLACKHAWK®

TE-621 Vacuum and Fuel Pump Tester

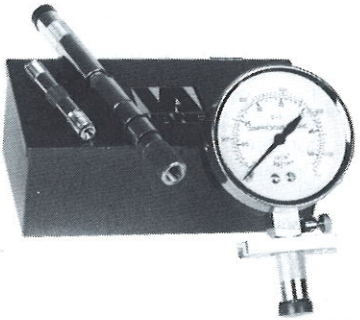
For checking vacuum defects, cylinder and intake system leaks, carburettor adjustment, uneven compression, fuel pump pressure and exhaust system back pressure. Vacuum...0-30 inches mercury Pressure...0-10 p.s.i.



VANE

VT-410 Cylinder Leakage Tester

The VT-410 is used to check whether leakage from the engine combustion chamber is excessive and to help determine exactly where this leakage is occurring—inlet valves, exhaust valves, piston rings, head gasket—so that a more precise estimation of engine condition can be made.



VANE

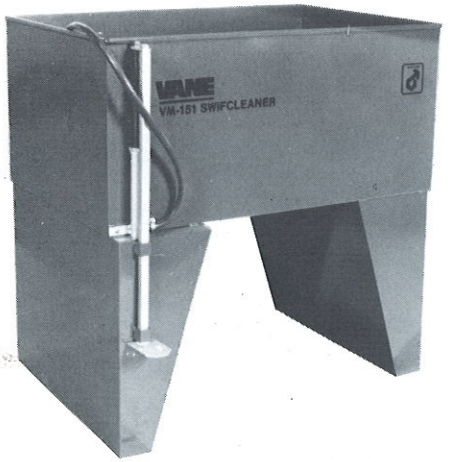
140 Diesel Compression Gauge

Ideal for checking valves, rings and weak cylinders. A 10 cm gauge, reading 0-5000 kPa with holding valve fits all standard 25mm injectors of any length up to 137mm. Supplied with set of universal adaptors.

VANE

VM-150 Diesel Nozzle Tester

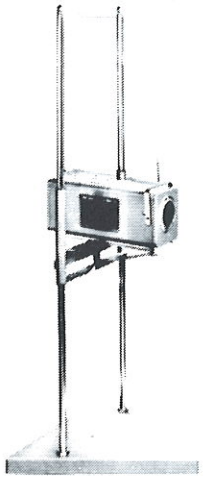
A hand-operated high-pressure pump forces oil through the injector nozzle to check atomization and operating pressure. Precision gauge calibrated to 0-28000 kPa.



VANE

VM-151 Swifcleaner

Autoparts and machinery cleaner and degreaser, uses kerosese or any non-corrosive detergent, automatically filtering and reclaiming fluid. Foot operated...requires no electrical power.



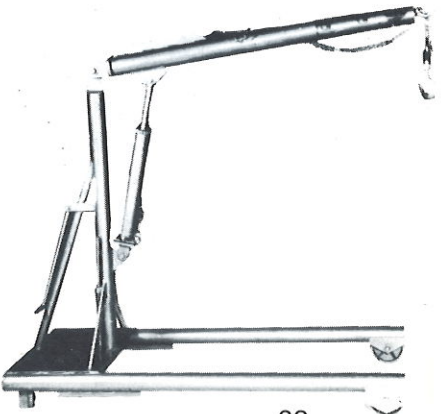
VANE

VM-125 Headlight Aimer

Ensures accurate headlight adjustment to comply with safety inspection requirements.

VM-126 Headlight Aimer

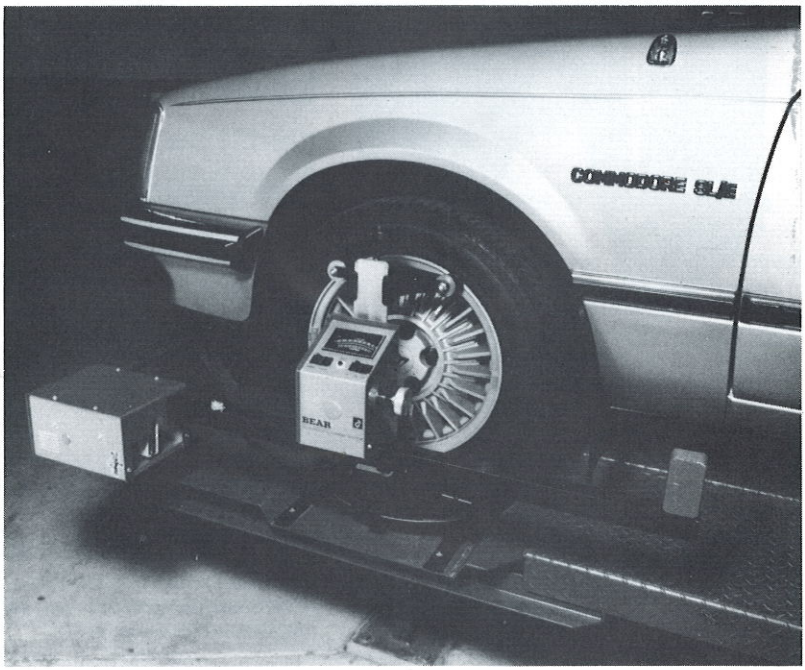
Similar to Model VM-125 but incorporates a light intensity meter operated by a photo-electric cell.



VANE

HP-½ Floor Crane

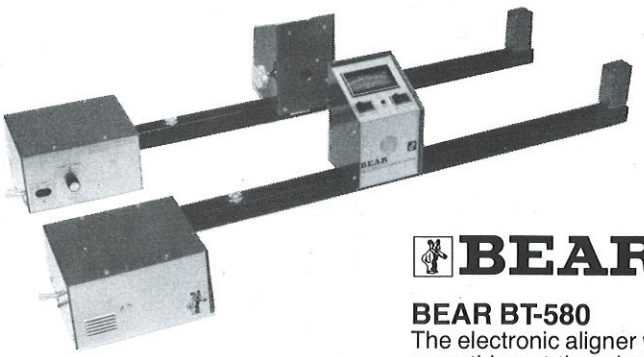
Designed for easy manoeuvrability around the workshop. Hydraulic operation lightens the load.



BEAR

Telaliner III wheel alignment systems

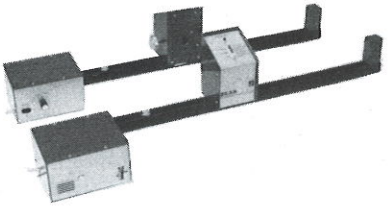
Top-of-the-line features at a down-to-earth price.
Today's motorists know that correct wheel alignment reduces tyre wear, improves handling and driving enjoyment and makes the car safer on the road.
With the Bear Telaliner III there is no guesswork. It tests the steering, tracking and suspension geometry and you get a centred steering wheel, the first visible proof to your customer of a job well done.
Standard attachments with BT-580 and BT-590 – **quick compensating self-centering wheel clamps –** fit 10" to 17" wheels.
Left rear tracking mirror – hooks over top of tyre and rests against rim.
Cable set to suit Telaliner III models.
Calibration kit – keeps the Telaliner III aligner in good condition.
Optional accessories – steering wheel holder – pedal depressor – swivel stand – turning radius gauge set and alignment merchandising signs.
Examine your workshop's potential and get in line with BEAR – BEAR really means business.



BEAR

BEAR BT-580

The electronic aligner with everything-at-the-wheels. Meter-at-the-wheel includes zero-set caster push button switch and colour-coded illuminated caster/camber scales. Projectoe system includes adjustment to indicate and compensate for set-back. Operates from 12V vehicle battery.

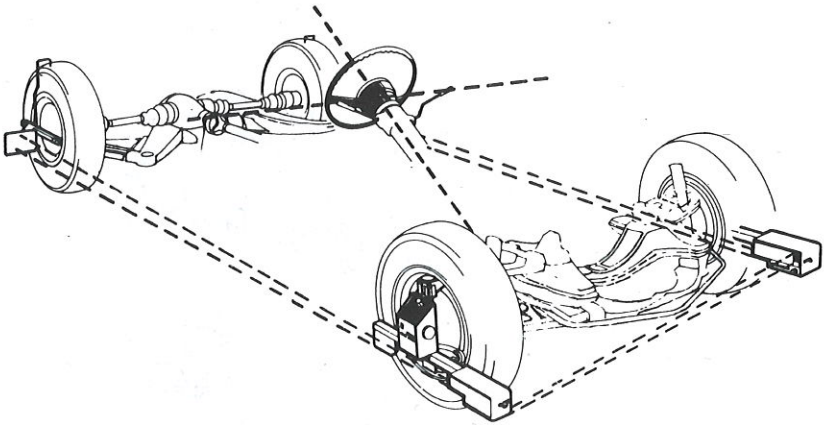


BEAR

BEAR BT-590

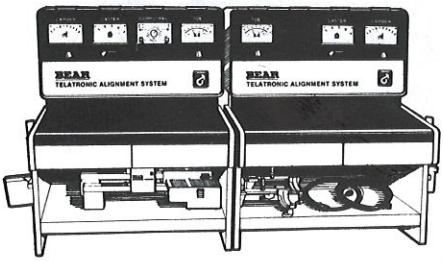
The single console electronic aligner with colour coded illuminated caster and camber indicators, the electronic Projectoe system and the up-to-date sensor design offering extreme accuracy with minimum maintenance. The unit is as modern as tomorrow. Power requirements 240V 1PH 50Hz.

WHEEL ALIGNMENT



The BEAR Telatronic Alignment System
- provides a centred steering wheel
- compensates for front wheel set back
- gives direct reading of rear toe
- compensates for rear toe
- compensates for rear axle shift or skew.

Front toe is set after taking the complete vehicle system into consideration.

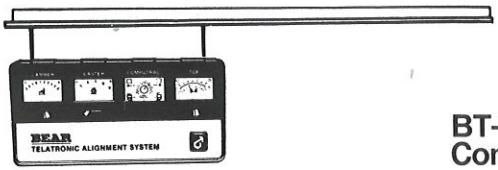


BT-685 Deluxe Double Bench Consoles

BT-680 Single Bench Console.

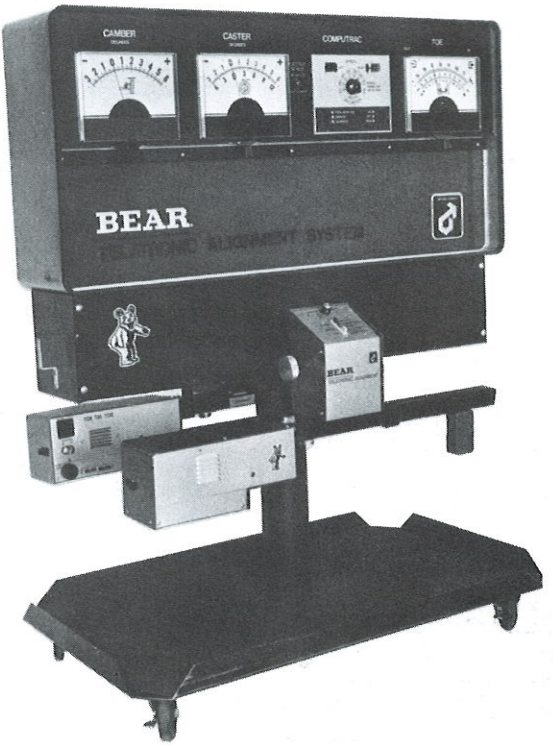
BT-665 Double Wall-Mount Consoles

BT-660 Single Wall-Mount Console



BT-661 Single Track-Mount Console

WHEEL ALIGNMENT

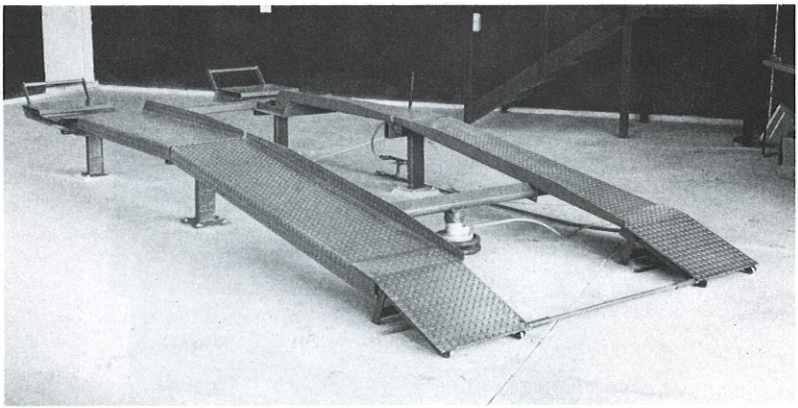


BEAR

BT-674 Telatronic Wheel Aligner

Roll-Around TELATRONIC Console with bold 20 cm back-lighted meters. Computrac Memory Centre has left and right wheel indicator lights, wheel diameter selector, calibration and power switches. And Computrac performs all complex calculations. The back-lighted Telatronic panel may be left on to display your alignment services, whilst the instrument power is switched off.

TELATRONIC Wheel Units have simple colour-keyed puch buttons for ease of operation and precise measurement. Only 10° caster swing (total 20°) required. Steering axis inclination readings shown directly on wheel units. Brilliant quartz-halogen lamps beam sharp easy-to-register toe and tracking readings. Engineered to totally align a vehicle with centred steering wheel...first time every time!

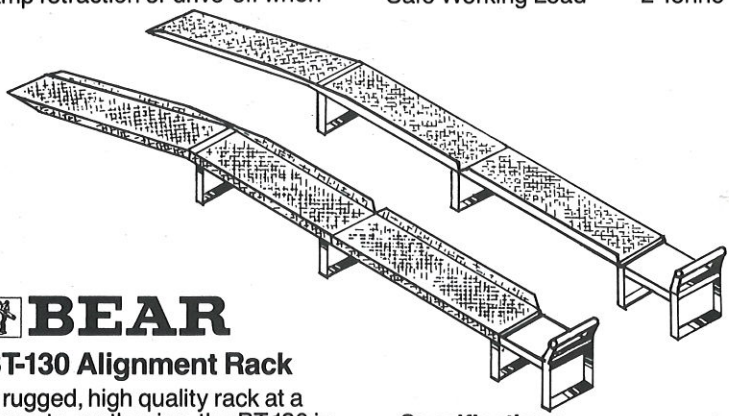


BEAR

BT-180 "Liftaramp" Alignment Rack

A real workshop space-saver, the "LIFTARAMP" has air-lift approach ramps which reduce the overall length required. Safety plates are included to prevent unintentional ramp retraction or drive-off when elevated. Exceptionally rugged construction provides rigidity for accurate alignment work.

Vehicle Wheelbase	3.3M MAX
Inside Tyre Width	1.0M MIN
Outside Tyre Width	1.9M MAX
Rack Length	4.75M
Rack Width	2.02M
Rack Height	.54M
Tread Height	.48M
Safe Working Load	2 Tonne



BEAR

BT-130 Alignment Rack

A rugged, high quality rack at a down-to-earth price, the BT-130 is suitable for use with any models of the BEAR TELALINER III or TELATRONIC Wheel Aligners. The center runway sections are removable for easier access under the vehicle...a benefit for both wheel service and general service work.

Specifications:

Vehicle Wheelbase	3.3M MAX.
Inside Tyre Width	1.0M MIN.
Outside Tyre Width	1.9M MAX.
Rack Length	6.1M
Runway Height	0.46M
Rack Width	2.0M
Safe Working Load	2 Tonnes

VANE

VM-100 Air Conditioner Charger

Automobile air conditioner installation and servicing is made easier and more profitable with the VANE VM-100. Straightforward operating procedure allows even an inexperienced mechanic to evacuate and recharge the system quickly. The inbuilt vacuum pump evacuates down to 101 kPa and recharging is precise with a unique refrigerant weighing device. There's a simple, effective holding mechanism which accepts a standard 25 kg refrigerant bottle to provide 20 average charges without refilling. Easy-to-read gauge scales monitor high and low system pressures. Bold styling helps merchandise air-conditioner service facility.

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BLACKHAWK®

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VANE

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Catalogues required_____

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